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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,542	12/14/2000	Paul G. Wilson	13551	6558

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EXAMINER
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HOM, SHICK C

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/735,542	<b>Applicant(s)</b> WILSON ET AL.	
	<b>Examiner</b> Shick C. Hom	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,6,9-20 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,9-20 and 22-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/16/07 has been entered.

***Response to Arguments***

2. Applicant's arguments filed 2/16/07 have been fully considered but they are not persuasive. In page 10 line 27 to page 11 line 3 of the arguments, applicant's interpretation that the predetermined level recite in the advisory action as equating to the number of currently available resources in Schunk et al. is not correct; but rather the QoA levels shown in Fig. 15 equates to the "pre-determined level" of the applicant's claims, and now "priority threshold" as amended in the claims, i.e. the priority levels are QoA-1, QoA-2, QoA-3, QoA-4, whereby QoA-1 is the highest level, and the corresponding occupancy

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thresholds are shown as Local/Global-QoA-0, Local/Global-QoA-8, Local/Global-QoA-16, Local/Global-QoA-24, respectively.

In page 10 lines 21-26 of the remarks/arguments, applicant argued that Schunk et al. do not teach or suggest the case whereby request will be granted despite the usage level not being below the occupancy threshold is not persuasive because Col. 1 line 66 to col. 2 line 10 recite the QoA levels being used to prioritize the incoming connection requests when there is competition for resources whereby the higher QoA level is given a higher priority; Fig. 15, items of columns 348 and 350 shows that regardless of the current usage level, requests having the highest priority level QoS-1 will always be allocated the resource, see items of columns 352 and 354, respectively, over the other priority level requests; further, if the current resources available is 10 modems instead of 32 then connection request with priority levels 1 and 2 will be allocated the resources because 10 is higher than 0 or 8, while connection request with priority levels of 3 and 4 will not be allocated the resource because 10 is not higher than 16 or 24 required for priority levels of 3 and 4 and if the current usage level is anywhere above 3 then clearly QoS-2 requests will not be allocated but QoS-1 requests will be allocated because it has a higher priority threshold, namely priority threshold

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Local/Global-QoA-0 is higher than priority threshold

Local/Global-QoA-8 shown in Fig. 15.

In page 13 lines 6-18 of the remarks/arguments, applicant argued that Schunk et al. do not teach or suggest the probability of blocking as recited in claim 19 is not persuasive because col. 15 lines 34-43 recite achieving a higher probability of connection for the higher priority service level access.

In response to applicant's arguments in page 12 lines 3-10, the recitation of a multi-service gateway with a pool of port processing software entities each having sufficient capacity to provide processing for any of the packet-switched port has not been given patentable weight because the recitation of a gateway occurs in the preamble of claim 20. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-4, 6, 9-17, 19-20, 22, 26-27, and 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Schunk et al. (6,980,515).

Regarding claims 1, 3, 13-15, 20, 22, 26-27, and 29-31:

Schunk et al. disclose a multi-service gateway, comprising; means for receiving a connection request; means for determining a usage level of resources in a resource pool in the multi-service gateway; and means for allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold (the abstract recite providing resource for access to the multi-service network being determined by the call's QoA level of the connection request and current resource usage; col. 18 lines 53-

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61 recite the resource pool and updating status of the resource pool), otherwise

determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold as in claims 1, 20-22, 27, 29-31; and receiving the connection request prior to allocating resources from the resource pool as in claim 3 (Fig. 13 and the example of col. 15 line 58 to col. 16 line 40 shows and recites the access threshold associated 330 with the QoA level 328, whereby if the system resource usage is 50 percent or less, then Users 1, 2, and 3 remain connected and if the resource utilization exceed the access threshold 330 corresponding to the user's QoA level 328 then the new connection request is refused; the abstract recites tiered access to the system resources; col. 31 lines 23-25 recite first tier connection requests being automatically allocated; col. 15 line 58 to col. 16 line 40 recite new users in the same QoA level are not permitted access to system resource until more resources become available; further, col. 1 line 66 to col. 2 line 10 and col. 8 line 58 to col. 9 line 2 recite the use of quality of access QoA levels to prioritize connection requests when there is competition for resources whereby connection request with a higher QoS level is

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given priority over a lower QoA level) as in claims 1, 3, 13-15, 20, 22, 26-27, and 29-31.

Regarding claim 4:

Schunk et al. disclose receiving the connection request from a connection server/broker prior to allocating resources from the resource pool (see col. 3 lines 49-59 which recite the route server which performs the functions of the forwarding module).

Regarding claims 6, 9:

Schunk et al. disclose wherein the priority level of the connection request is a function of the type of traffic carried by the requested connection and wherein each connection request is associated to a type of traffic selected from the group consisting of originating, terminating, feature and progress (see col. 2 lines 11-21 which recite the connection request being assigned a QoA based on the inlink type of the call which clearly anticipate the type of traffic selected from the group consisting of originating, terminating, feature and progress).

Regarding claim 10:

Schunk et al. disclose wherein the priority level of progress traffic is greater than the priority level of feature traffic, which is greater than the priority level of terminating traffic, which is greater than the priority level of originating



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traffic (col. 15 line 58 to col. 16 line 40 which recite that new users in the same QoA level are not permitted access to system resource until more resources become available clearly reads on the priority level of progress traffic being greater than the priority level of feature traffic, which is greater than the priority level of terminating traffic, which is greater than the priority level of originating traffic) as in claim 10.

Regarding claims 11-12:

Schunk et al. disclose wherein the processing resources are software resources for processing packets (see col. 8 lines 17-34 which recite the software resources needed for the connection) as in claim 11 and wherein the processing resources are port processing resources (see col. 23 lines 19-28 which recite processing ports for the connection) as in claim 12.

Regarding claims 16-17:

Schunk et al. disclose that if no processing resources are allocated to satisfy the connection request, blocking the connection request as in claim 16 and reporting blockage of the connection request to a connection server/broker as in claim 17 (see col. 1 lines 51-55 which recite that due to user traffic and lack of resources, customer access may be refused and customer gets a busy signal and col. 4 lines 18-30 which recite the use of the digital modem server for providing access).

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Regarding claim 19:

Schunk et al. disclose selecting the pool occupancy threshold to achieve a probability of blocking that is less than a pre-determined value (see col. 15 lines 34-43 which recite achieving a higher probability of connection for the higher priority service level access and col. 15 line 64 to col. 16 line 10 which recite associating an access threshold with each QoA level and if resource utilization exceeds the threshold corresponding to the QoA level the request is refused whereby system resources become limiting once threshold reaches 25 percent clearly anticipate selecting pool occupancy threshold to achieve blocking less than a pre-determined value).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),

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the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 18, 23-25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schunk et al. (6,980,515) in view of Shaffer et al. (6,516,059).

Regarding claims 24-25:

Schunk et al. disclose use of a time-division multiplexed (TDM) format as in claim 24; and use of an asynchronous transfer mode (ATM) format or an Internet Protocol (IP) format as in claim 25 (see col. 4 lines 52-64 which use the use of TMD busses and ATM busses on the switch's backplane).

Regarding claims 18, 23, and 28:

Schunk et al. disclose the method and device described in paragraph 4 of this office action. Schunk et al disclose all

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the subject matter of the claimed invention with the exception of wherein each PPSE has the capability to perform conversion of a signal from a circuit-switched format to a packet-switched format as in claim 23; and a plurality of circuit-switched ports and a set of circuit-switched connection resources, wherein the resource manager is further adapted to determine whether circuit-switched connection resources are required to satisfy the connection request and, if circuit-switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources as in claims 18, 28.

Shaffer et al. from the same or similar fields of endeavor teach that it is known to provide wherein each PPSE has the capability to perform conversion of a signal from a circuit-switched format to a packet-switched format (see col. 4 lines 18-30 which recite the gateway translating signals from a packet-switched format to a circuit-switched format reads on conversion of a signal from a circuit-switched format to a packet-switched format) as in claim 23; and a plurality of circuit-switched ports and a set of circuit-switched connection resources, wherein the resource manager is further adapted to determine whether circuit-switched connection resources are required to satisfy the connection request and, if circuit-

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switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources (see abstract which recite allocating resource to support call-related features includes determining resource availability and col. 3 line 53 to col. 4 line 5 which recite load sharing including transfer of data over telephone network clearly reads on connecting and controlling the circuit-switched connection resources) as in claims 18, 28.

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the capability to perform conversion of a signal from a circuit-switched format to a packet-switched format; and a plurality of circuit-switched ports and a set of circuit-switched connection resources, wherein the resource manager is further adapted to determine whether circuit-switched connection resources are required to satisfy the connection request and, if circuit-switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources as taught by Shaffer et al. in the communications method and gateway of Schunk et al.

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The capability to perform conversion of a signal from a circuit-switched format to a packet-switched format; and a plurality of circuit-switched ports and a set of circuit-switched connection resources, wherein the resource manager is further adapted to determine whether circuit-switched connection resources are required to satisfy the connection request and, if circuit-switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources can be implemented by connecting the circuit-switched format to packet-switched format converter and circuit-switched network of Shaffer et al. to multi-service network switch of Schunk et al. The motivation for using the circuit-switched format to packet-switched format converter and circuit-switched network as taught by Shaffer et al. in the communication method and gateway of Schunk et al. being that it provides the desirable added feature of providing both circuit-switching and packet-switching to the multi-service network of Schunk et al.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Marinho et al. disclose a dynamic variation of class of service in a communication network based on network resources.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SH SH

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